REMARKS

Claims 1-4, 7-15 and 18-22 are pending in the present application. Applicants respectfully request reconsideration of the application in view of the amendments and remarks.

I. Rejections Under 35 U.S.C. § 103

Claims 1-2, 4, 10, 12-13, 15 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *McCanne* (US 2003/0088696 A1) in view of *Haas et al.* (US 7,035,937 B2).

Claims 1 and 12 are the independent claims.

Claims 1 and 12 claim, *inter alia*, "defining a target bandwidth less than a maximum link bandwidth of edges of the overlay spanning tree given a fully connected overlay distribution graph, constructing a reduced overlay distribution graph having a minimum bandwidth greater than the target bandwidth by iteratively removing an edge from a current overlay distribution graph."

Applicants appreciate the comments found in the Advisory Action. The Examiner stated essentially that the "McCanne teaches the claimed invention where it creates or configures the overlay router to perform stream thinning or reducing the bandwidth..." is analogous to the limitation above. In response, please consider the following:

McCanne teaches methods for controlling packet flow through points of bandwidth constraint specified by external policies (see paragraph [0044]). The distinction here is that *McCanne* is concerned with controlling bandwidth use through thinning data while the claimed invention controls a bandwidth of the network itself. These concepts, though while both using the term "bandwidth" are unrelated. Consider that *McCanne* explicitly teaches that "the overlay multicast service model transforms packets as necessary in order to forward application-level

flows in a bandwidth managed fashion." Clearly then, *McCanne* transforms packet data and does not teach or suggest a method for constructing a reduced overlay distribution graph having a minimum bandwidth greater than the target bandwidth, as essentially claimed in Claims 1 and 12. *McCanne's* intended purpose is to transform (thin) a stream of packets as necessary to pass through the choke points. Thus, *McCanne's* bandwidth constraint is not analogous to the claimed target bandwidth of the overlay distribution graph; the claimed target bandwidth of the overlay distribution graph is used as a threshold to remove edges having bandwidths below the threshold bandwidth (choke points) in a process of configuring an overlay spanning tree to have a minimum bandwidth greater than the target bandwidth, while *McCanne's* policy-defined bandwidth constraints are choke points in a network through which the packet flow is made to fit. Thus, *McCanne* changes the packet data to fit the bandwidth constraints of an existing network while the claimed invention creates a network (through edge removal) to support at least the threshold bandwidth – clearly then these are quite different inventions. For example, in response to a choke point, *McCanne* transforms the packet flow by reducing frame rates or dropping packets (see paragraphs [0010 and 0044]), whereas the claimed invention would remove the choke point from the overlay spanning tree (assuming it is less than the threshold bandwidth).

For at least the foregoing reasons, *McCanne* does not teach or suggest every limitation of Claims 1 and 12.

Haas teaches a routing protocol for an ad hoc network that employs alternate tree computation algorithms that continually compute backup trees that can be employed to replace failed trees. *Haas* does not teach or suggest "defining a target bandwidth less than a maximum link bandwidth of edges of the overlay spanning tree given a fully connected overlay distribution graph, constructing a reduced overlay distribution graph having a minimum bandwidth greater

than the target bandwidth by iteratively removing an edge from a current overlay distribution graph," as claimed in Claims 1 and 12. *Haas* is silent on implementing bandwidth requirements or constraints of any kind. Therefore, *Haas* fails to cure the deficiencies of *McCanne*.

The combination of *McCanne* and *Haas* teaches bandwidth constraints specified by external policies and a routing protocol for an ad hoc network that employs alternate tree computation algorithms that continually compute backup trees that can be employed to replace failed trees. The combination does not teach or suggest "constructing a reduced overlay distribution graph having a minimum bandwidth greater than the target bandwidth by iteratively removing an edge from a current overlay distribution graph," as claimed in Claims 1 and 12. Accordingly, the combination does not teach or suggest every limitation of Claims 1 and 12.

Applicants respectfully submit that inasmuch as Claims 2, 4, 10, 13, 15 and 21 are dependent on Claims 1 and 12, the dependent claims are allowable for at least the reasons given for Claims 1 and 12. Reconsideration of the instant rejection is respectfully requested.

Claims 3, 11, 14 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *McCanne* in view of *Haas*, in further view of *Silton et al.* (US 6,327,252).

Claims 3, 11, 14 and 22 depend from Claims 1 and 12, and are believed to be allowable for at least the reasons given for Claims 1 and 12. Reconsideration of the instant rejection is respectfully requested.

Claims 7-9 and 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *McCanne* in view of *Haas*, in further view of *Hsu* (US 6,363,319 B1), in further view of *Grover et al.* (US 2002/0187770 A1).

Claims 7-9 and 18-20 depend from Claims 1 and 12, and are believed to be allowable for at least the reasons given for Claims 1 and 12. Reconsideration of the instant rejection is respectfully requested.

CONCLUSION

For the forgoing reasons, the application, including Claims 1-4, 7-15 and 18-22, is believed to be in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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